6. Linkages

Many issues and concerns overlap between the Levee Program and other CALFED components, and between the Levee Program and ongoing programs of other agencies. The Levee Program strives to identify all possible connections and areas of overlap, to coordinate with other programs to the maximum possible extent for mutual benefit, and to ensure that Levee Program objectives do not conflict with other programs.

One issue of concern to the Levee Program, as well as to numerous agencies and stakeholders, is the need for a well-maintained common datum in the Delta. A group composed of the U.S. Geological Survey, National Geodetic Survey, U.S. Bureau of Reclamation, DWR, and others recently completed efforts to establish a set of elevations in the Delta consistent with the National Vertical Datum (NAVD88) geodetic network for vertical control. The network consists of 100 benchmarks spaced at approximately 7 kilometers. The Levee Program is seeking ways to support tie-in to the common datum by Levee Program participants, as well as by agencies and other Delta interests.

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Many linkages exist between the Levee Program and the Ecosystem Restoration Program. As discussed earlier, the Levee Program seeks to reduce the conflict between protection of wildlife habitat that occurs on levees and maintenance of the levees to prevent their failure. The Levee Program and the Ecosystem Restoration Program have collaborated extensively to develop strategies in order to minimize potential conflicts and to identify key areas where Ecosystem Restoration Program/Levee Program efforts can be coordinated. (For a detailed discussion of this issue, refer to the earlier section, "Ecosystem Restoration Program/Levee Program Coordination".) Another area of overlap between the Levee Program and the Ecosystem Restoration Program concerns efforts to reduce or reverse subsidence and actions to restore habitat. Both the Delta ecosystem and levee system stability can benefit from reducing land surface subsidence adjacent to levees. The creation of shallow-wetland habitat serves to reduce or reverse subsidence.

Dredge permitting is a common area of concern for several CALFED programs.

Dredge permitting is a common area of concern for the Levee Program, the Ecosystem Restoration Program, and the Water Storage and Conveyance Program. Dredge permitting issues addressed by the Levee Program (as discussed in detail in the "Permit Coordination" section) also affect the Ecosystem Restoration Program. The Ecosystem Restoration Program will require dredge permits in order to use dredged materials to create shallow-water habitat. Thus, the Levee Program's efforts to resolve dredge permitting issues also will benefit the Ecosystem Restoration Program.

Water quality and water supply reliability are closely tied to the integrity of the levee system. The consequences of a levee breach to water quality and water supply reliability can be catastrophic. Improvements to levee system integrity provided in the Levee Program also serve to provide better protection for water quality and water supply reliability. The Emergency Management and Response element of the Levee Program also will serve to better protect water quality and water supply reliability in the event of a levee breach by providing for a more immediate and organized response. An area of common concern for the Levee Program and Water Quality Program is toxicity of sediments and water quality impacts from dredging. Research advocated by the Levee Program to resolve dredge permitting issues also will provide useful information for the Water Quality program.

The consequences of a levee breach to water quality and water supply reliability can be catastrophic.

There are many significant linkages between levee system integrity and water storage and conveyance. Reservoir storage and levees function as a system with regard to flood control. CALFED proposals for setback levees are included in the Ecosystem Restoration Program and Water Storage and Conveyance Program. Hydraulic impacts on levees caused by construction of setback levees and other storage and conveyance modifications, such as changed operation of flow control structures, will be examined. The hydraulic impacts of levee maintenance and construction work included in the Levee Program will be examined on a project-specific basis. As with the Ecosystem Restoration Program and Water Quality Program, dredge permitting issues resolved by the Levee Program would benefit the Water Storage and Conveyance Program. The Water Storage and Conveyance Program will require dredge permits for dredging to increase channel capacities for conveyance and flood control. Thus, the Levee Program's efforts to resolve dredge permitting issue will also benefit the Water Storage and Conveyance Program.

Reservoir storage and levees function as a system with regard to flood control.

Levee system integrity also is linked to watershed management. Many proposed watershed management actions may reduce the risk of levee failures by moving the timing, variability, and duration of floodplain inundation and water table elevation closer to an undisturbed condition through meadow restoration and wetland development.

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In addition to coordination with other CALFED programs, the Levee Program is working in conjunction with efforts outside CALFED, where feasible. The Levee Program is working in coordination with the Corps on a "Delta Special Study" that will address rehabilitation and improvement of levees in the Delta. These coordination efforts could develop into a long-term Delta levee reconstruction program, with cost-sharing agreements among the Corps, State, and local agencies.

CALFED also is coordinating with the Corps and the Board in their efforts on the "Sacramento-San Joaquin River Basins Comprehensive Flood Control Study" currently under way. Because the comprehensive flood control study area includes major tributaries into the Delta, CALFED actions need to be compatible with all comprehensive study actions.

The Levee Program has been communicating with representatives of the Long-Term Management Strategy (LTMS) Program to identify areas where coordination between the programs would be beneficial. The LTMS Program was launched in the Bay area to identify technically feasible and environmentally acceptable dredging and disposal options, and to develop a research program leading to a long-term management plan for dredging and disposal in the Bay Area. Information sharing between the two programs is beneficial in that the programs face many similar regulatory issues. In addition, many areas of technical information overlap, although the usefulness of the LTMS Program data to CALFED is limited by the greater salinity of the LTMS program environment. The Levee Program also has considered the use of dredged materials from the LTMS Program for levee construction

and subsidence control.